

## Future Dairy Farm Systems Project – NARF (Dargaville)

This project compares the productivity, profitability and impact on people and the environment on three farms, being:

1. **Current Farm** – Kikuyu & ryegrass based pastures with up to 190 kg N/ha/annum, 3.1 cows/ha
2. **Alternative Pastures Farm** – Fescue & cocksfoot based pastures, up to 190 kg N/ha, 3.1 cows/ha
3. **Low Emissions Farm** – Kikuyu & ryegrass based pastures, designed to reduce methane emissions by 25% and nitrous oxide by 50%, no nitrogen applied, 2.3 cows/ha

*This project is funded by DairyNZ, MPI (Sustainable Food & Fibre Futures) and Hine Rangī Trust.*

Update – 13 <sup>th</sup> July 2023	Current Farm	Alternative Pastures Farm	Low Emissions Farm
Avg Pasture Cover (kg DM/ha, excl silage pad)	2273	2261	2145
Pasture Growth (kg DM/ha/d, last 2 weeks)	32	28	24
Rotation Length (days)	67	64	77
Cows in Milk/Peak Cows	11/83	9/84	10/62
Supplement Fed (kg DM/cow/day)	5.0 PKE	4.8 PKE	10.8 Baleage
Purchased Supplement Fed (kg DM/cow 2023-24 season)	173 PKE	115 PKE	
Homegrown Silage Fed (kg DM/cow 2023/24 season)	0	56 Baleage	194 Baleage
Homegrown Silage on hand (kg DM/cow)	0	0	285
Average Body Condition Score (Milkers)	5.05	5.0	4.74
Worry Score (1 = Low, 10 = High)	7	7	7
Nitrogen to date – 2023/24 Season (kg N/ha)	31	28	0
Rainfall (mm last 2 weeks)	101 mm		

### CURRENT MANAGEMENT

- Another rainfall of 100mm in 14 days has kept soils waterlogged and grazing without soil damage is very challenging. Growth has improved slightly but pasture wastage is high so all herds have been standing off everyday with significant quantities of supplement.
- Current Farm and Alternative Pastures herds have gained weight on the high levels of PKE and the remaining dry cows have finally reached target calving BCS.
- Low Emissions cows have not gained weight which is surprising given the quantity of feed they have been offered in silage.
- Spring Rotation Planners are being followed diligently. Dry cows are allocated 30sq.m/c/d plus supplement. Milkers are then given the balance of the daily area allowed, plus supplement.
- Mg is being applied to both supplement and via trough.
- 2kg zinc sulphate is applied to hoof mats each day at entrance to standoff pads and cowshed.
- 80kg/ha Sustain is following herds when soil conditions are suitable.